



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

| APPLICATION NO.          | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------|-------------|----------------------|---------------------|------------------|
| 10/645,189               | 08/21/2003  | Jong-Kwon Kim        | 5000-1-328          | 7082             |
| 33942                    | 7590        | 06/03/2008           | EXAMINER            |                  |
| CHA & REITER, LLC        |             |                      | BELLO, AGUSTIN      |                  |
| 210 ROUTE 4 EAST STE 103 |             |                      |                     |                  |
| PARAMUS, NJ 07652        |             |                      | ART UNIT            | PAPER NUMBER     |
|                          |             |                      | 2613                |                  |
|                          |             |                      | MAIL DATE           | DELIVERY MODE    |
|                          |             |                      | 06/03/2008          | PAPER            |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/645,189             | KIM ET AL.          |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Agustin Bello          | 2613                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 28 March 2008.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-12 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ .  | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5-7, and 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsui (Patent Application Publication No. US 2002/0022467 A1).

Regarding claim 1, 10, and 11, Matsui teaches a power-supply device (reference numeral 100 in Figure 1) constructed independently from the media converters (reference numeral 30 in Figure 1); and, at least one power-supply socket device (reference numeral 12, 14, 20, 22, 28, 32, 34, 36, 110 in Figure 1) arranged between said electrical-communication equipment (reference numeral 100 in Figure 1) and said media converters (reference numeral 30 in Figure 1) to supply power from the power-supply device to the media converters and data from said electrical communication equipment to the media converters, wherein the power-supply socket device comprises a plurality of lines (reference numeral 12, 14, 22, 28 in Figure 1) for electrical interfacing and includes input/output data interfaces (reference numeral 34, 36 in Figure 1) for connection with the electrical-communication equipment and further includes input/output data interfaces (reference numeral 32, 36 in Figure 1) and power-supply interfaces (reference numeral 28, 32, 36 in Figure 1) for connection with the media converters.

Regarding claim 2 and 12, Matsui teaches the system as claimed in claim 1, wherein the power-supply socket device further comprises: a main power-supply socket device (reference numeral 110 in Figure 1) for directly receiving power from the power supply device; at least one dependent power-supply socket device (reference numeral 12 in Figure 1) for receiving the power from the main power-supply socket device; and, at least one conductor interface (upper reference numeral 122 in Figure 2) for connecting a dependent power-supply socket device to the main power-supply socket device.

Regarding claim 3, Matsui teaches the system as claimed in claim 2, wherein the at least one conductor interface (upper reference numeral 122 in Figure 2) alternatively connects a dependent power-supply socket device (reference numeral 12 in Figure 2) to another dependent power-supply socket device (reference numeral 14 in Figure 2).

Regarding claim 5, Matsui teaches the system as claimed in claim 1, wherein the electrical-communication equipment further includes additional interfaces (reference numeral 110' in Figure 3) that accommodate additional interface devices.

Regarding claim 6, Matsui teaches the system as claimed in claim 1, wherein the electrical-communication equipment transmits electrical signals to and from media converters through copper wire (reference numeral 100 in Figure 1).

Regarding claim 7, Matsui teaches the system as claimed in claim 1, wherein the at least one power-supply socket devices transmit power to the media converters through copper wire (reference numeral 22, 28, 100 in Figure 1).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui.

Regarding claim 4, Matsui teaches the system as claimed in claim 3, wherein said at least one conductor interface comprises a plurality of conductor interfaces (i.e. left ant right upper and lower reference numerals 122 in Figure 2) which are respectively arranged between a plurality of power supply socket devices (reference numeral 110, 120 in Figure 2). Matsui differs from the claimed invention in that Matsui fails to specifically teach a fuse interposed between the conductor interfaces to prevent the conductor interfaces from a short circuit. However, Official Notice is given that the use of fuses in electrical systems is well known in the art. One skilled in the art would have been motivated to employ a fuse in the apparatus of Matsui in order to prevent a short circuit and possibly a hazardous condition. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to employ a fuse in the apparatus of Matsui.

Regarding claim 8, Matsui teaches the system as claimed in claim. 1, but differs from the claimed invention in that Matsui fails to specifically teach that the media converters transmit optical data between one another through optical fiber. However, transmission of optical data through optical fiber is well known in the art and Official Notice is given to that effect. One skilled in the art would have been motivated to transmit the optical data between the media

converters via optical fiber in order to contain the optical signal within a certain area, thereby increasing the signal to noise ratio and improving the connection speed between the media converters.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui in view of Kline (Patent No. US 6,933,835 B2).

Regarding claim 9, Matsui differs from the claimed invention in that Matsui fails to specifically teach that the media converter comprise an amplifier, a laser diode, and a photodiode. However, Matsui suggests as much via disclosure of support for infrared communication (paragraph [0043]). Furthermore, Kline teaches that media converters comprised of an amplifier, a laser diode, and a photodiode are well known in the art (Figure 6). One skilled in the art would have been motivated to include an amplifier, a laser diode, and a photodiode in the media converter of Matsui in order to convert electrical signals from a power line into light signals for transmission over a communication medium (column 9 lines 28-36 of Kline). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include an amplifier, a laser diode, and a photodiode in the media converter of Matsui.

#### ***Response to Arguments***

6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/645,189  
Art Unit: 2613

Page 7

/Agustin Bello/

Primary Examiner, Art Unit 2613